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FOREST SERVICE

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BIOLOGICAL EVALUATION OF THE RED-HEADED PINE SAWFLY ON THE BESSEMER RANGER DISTRICT, OTTAWA NATIONAL FOREST

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INTRODUCTION

The Ottawa National Forest staff reported the red-headed pine sawfly, Neodiprion lecontei (Fitch), outbreak on the Bessemer Ranger District. The Forest Pest Control staff provided survey instructions and the Forest staff collected the field data used in this evaluation. The damage and biology of red-headed pine sawfly is discussed in detail in an earlier report for the Ottawa National Forest (Millers, 1969). The present evaluation summarizes only the data applicable to the Bessemer Ranger District outbreak.

PLANTATION DATA

The outbreak is located on the Bessemer Ranger District in T45N, R43W, Sec. 6 and southward along the highway M-64 to the Wisconsin border (about 5 miles). The plantation (P, 3-0, RP-S64) is about 75 acres planted in several units in cut-banks along the highway. The largest unit is about 30 acres. The trees were planted in 1964 and range from 1-5 feet in height.

SURVEY METHODS

The survey is designed to determine the number of trees with sawfly defoliation and to estimate the degree of defoliation on the attacked trees. Forty clusters of 5 trees each were examined after the feeding was completed.

RESULTS AND DISCUSSION

The plantation is severely infested with red-headed pine sawfly. The following defoliation information was obtained:

1. 49% of all trees with some defoliation
2. 23.5% of all trees have more than 50% defoliation
3. 17% of all trees are more than 90% defoliated

About 17% of the trees are heavily defoliated (more than 90%) and probably will die. Another 32% of the trees had defoliation but they should survive. The trees are particularly vulnerable to severe defoliation because of their small size. There is no indication that the sawfly population will decline.

RECOMMENDATIONS

The Forest Manager is advised to consider suppression of the red-headed pine sawfly outbreak with 1/2 lb. malathion in 2 gallons of water per acre (for details see Millers, 1969).

The Forest Pest Control staff is planning to conduct a systematic detection survey in the surrounding red pine plantations. The Forest Manager should provide maps and locations of plantations (trees 1-10 ft. tall) within 6 miles of the known outbreak.

REFERENCES

MILLERS, I. 1969. Biological evaluation of red-headed pine sawfly on the Kenton Ranger District, Ottawa National Forest. USDA, Forest Service, NA S&PF, St. Paul Field Office Report No. 35. 4 pp.